

Applicant : Hisashi Shimizu et al.  
Serial No. : 09/536898  
Filed : March 28, 2000  
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Attorney's Docket No.: 10417-031001 S21-  
119638M/HW

### REMARKS

Claims 1 and 4 to 18 are pending. Claim 8 has been amended to correct informalities. Claim 15 has been rewritten into independent form by incorporating claim 1 in verbatim thereto. Now new matter has been added.

#### Claim Rejections – 35 USC §112

Claim 8 has been amended to correct the informality indicated by the Examiner. Withdrawal of this rejection is respectfully requested.

#### Claim Rejections – 35 USC §102

Claim 1 has been rejected as being anticipated by Huang et al. Claim 1 recites:

1. (Amended) A hybrid integrated circuit device comprising:  
a hybrid integrated circuit substrate in which at least a surface is provided with  
insulation;  
a first electrode and a second electrode formed on said surface;  
a light emitting element connected with the first and second electrode;  
a seal which is disposed in a periphery of said substrate; and  
**a transparent substrate which is fixed to said hybrid integrated circuit substrate  
via said seal to enclose the first and second electrodes and the light emitting element  
within a sealed space formed between said hybrid integrated circuit substrate and said  
transparent substrate.** (Emphasis added.)

The above bolded feature is not disclosed, taught, or suggested by the cited prior art. It is alleged in the office action that Huang et al.'s driver circuits 11 and 12, which are equated with first and second electrodes of claim 1, are enclosed within a sealed space formed between the substrate 25 (the hybrid integrated circuit substrate) and the second substrate 73 (the transparent substrate). However, this is not what Huang et al. discloses. An array area is defined by the bump pad 70 (see column 6, lines 19 to 20 and Fig. 6). And it is this array area that is sealed: "The first and the second bump pads 70 and 72 are bonded together to seal the array area..." (column 6, lines 36 to 37). Huang et al.'s Fig. 6 clearly shows that the circuits 11 and 12 are outside the sealed array area. Thus, Huang et al. does not anticipate the present invention as claimed in claim 1.

Claim Rejections – 35 USC §103

Claims 4 to 18 have been rejected as being unpatentable over Huang et al.

With regard to claims 4 and 13, Huang et al.'s driver circuits 11 and 12 are not sealed within the substrate 25 (the hybrid integrated circuit substrate) and the second substrate 73 (the transparent substrate) as explained above. Thus, it would not have been obvious to one of ordinary skill in the art to have inert gas filling the sealed space to prolong the life of the driver circuits because these are outside the sealed area.

With regard to claim 7, the light transmitting resin disposed on the light emitting element abuts against the transparent substrate. Therefore, because the light emitting element is connected to the first and second electrodes, which in turn are disposed on the surface of the hybrid integrated circuit substrate, the light emitting element are connected to both the transparent substrate and the hybrid integrated circuit substrate. In contrast, Huang et al.'s OED 40 is only in contact with the transparent substrate 25 (see Fig. 6). Thus, claim 7 would not have been obvious at least for this reason.

Claim 8 is not merely a design choice. The invention described therein serves a specific function as described on page 30, lines 1 to 16 or page 32, lines 13 to 22. That is, with at least one end the substrate being able to incline, the substrate can be configured to diverge or converge the light emitted from the device. There is no teaching of claim 8 and the specific advantages described in the specification. Claim 8 is patentable at least for these reasons.

Claim 16 is not directly addressed in the office action but mentioned together with claim 8. Regardless, Huang et al. does not disclose, teach, or suggest substrates that are arranged in a matrix array and having at least both ends inclined in vertical and lateral directions so as to approximate a paraboloid, and an object to be heated disposed in a focal point of the paraboloid. This is not merely a design choice (see above). Thus, at least for this reason claim 16 is patentable over Huang et al.

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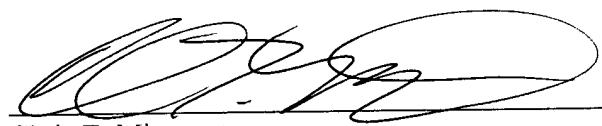
Other dependent claims 5, 6, 10 to 12, 14, 15, 17, and 18, which depend on claim 1 directly or indirectly, are patentable at least for the same reason as claim 1.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the claims:

Claims 8 and 15 have been amended as follows:

8. (Twice Amended) A consolidated hybrid integrated circuit device according to claim 18 wherein said hybrid integrated circuit substrates are arranged in a matrix array and at least one end [ones] of said hybrid integrated circuit substrates [are] is inclined at a predetermined angle with respect to a centrally located hybrid integrated circuit substrate.

15. (Twice Amended) A hybrid integrated circuit device [according to claim 1,] comprising:

a hybrid integrated circuit substrate in which at least a surface is provided with insulation;  
a first electrode and a second electrode formed on said surface;  
a light emitting element connected with the first and second electrode;  
a seal which is disposed in a periphery of said substrate; and  
a transparent substrate which is fixed to said hybrid integrated circuit substrate via  
said seal to enclose the first and second electrodes and the light emitting element within a sealed  
space formed between said hybrid integrated circuit substrate and said transparent substrate,  
wherein the hybrid integrated circuit substrate is made of glass.